

MURPHY
OIL USA, INC.

MERAUX REFINERY
P. O. BOX 100
MERAUX LA 70075-0100

February 1, 2008

HAND DELIVERED

Office of the Parish President
St. Bernard Parish Government
8201 W. Judge Perez Blvd
Chalmette, LA 70043

RE: Environmental Assessment Statement - update
Title V General Permit Application – Public Notice
Murphy Oil USA, Inc. - Meraux Refinery
2500 E. St. Bernard Highway, St. Bernard Parish, Meraux, LA
Agency Interest No.: 1238
Title V Permit No.: 3062-V0
Activity No.: PER20070005

Gentlemen,

Murphy Oil USA, Inc. (MOUSA) submitted an application for a Title V General Permit to LDEQ on November 16, 2007. As part of the Public Notice requirements, LDEQ requested that MOUSA submit to you a copy of the updated Environmental Assessment Statement found in the permit application. LDEQ also requires MOUSA to provide proof of this submittal, so MOUSA respectfully requests a representative of your office to complete the following to acknowledge receipt of this information.

<u>Ethel B. Llamas</u>	<u>Ethel B. Llamas</u>	<u>2/1/08</u>
Name	Signature	Date

Should you have any questions regarding this submittal, please contact me at (504) 271-4141.

Very truly yours,

Murphy Oil USA, Inc.

Matthew Dobbins
Matthew Dobbins
Senior Environmental Engineer
Meraux Refinery

Attachments

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MURPHY
USA ★

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Environmental Assessment Statement
For Coverage Under the General Title V Permit
for Tank Replacement Project
Murphy Oil USA Inc.
Agency Interest No. 1238

Overview:

Murphy Oil USA, Inc. (MOUSA) proposes to permit 5 new tanks as replacements for existing tanks at its Meraux Refinery. The request is to authorize five tanks to be covered by the already existing DEQ General Title V permit. This General Permit has already been approved by EPA and has undergone public notice and comment. Coverage under a Title V permit is required before construction can commence on these tanks.

Because the total emissions from the tanks are below all applicable major source/major modification thresholds (and because the new tanks will have emissions in the aggregate less than the emissions of the existing tanks they will replace), an Environmental Assessment Statement per La. R.S. 30:2018 is not required.

The total emissions from all five new tanks in the aggregate will be lower than the permitted totals for the existing tanks in the existing permit. The new total potential to emit is 5.93 TPY VOCs whereas the total for the existing five tanks was 18.45 TPY (without cap). Some of the five tanks individually will have just slightly higher emissions than the tanks they replace, but only because they will have a second guide pole to accommodate radar-based level sensors. This is a safety improvement. Four will be new tanks, but will go back in the same location as before. All four will be surrounded with the same dike that surrounded the former tanks. Thus, the overall impact on ambient air is even less than the existing permit would allow.

La. R.S. 30:2018.A. requires submittal of an environmental assessment statement with a permit application for “a new permit . . . that would authorize the treatment, storage, or disposal of hazardous wastes, the disposal of solid wastes, or the discharge of water pollutants or air emissions **in sufficient quantity or concentration to constitute a major source.**” An environmental assessment is also applicable if the increase in emissions at an existing facility would constitute a major modification. The proposed project is to replace 5 tanks at the Murphy Oil facility with 5 new tanks, and the overall project will result in an emissions decrease – not an increase. Thus, an environmental assessment statement is not required under the law.

Further, even if these were stand-alone new tanks rather than replacements, the quantity of emissions from the 5 new tanks is so small that the project would not be considered to be a major source or a major modification. The total emissions from all 5 tanks is only 5.93 TPY of VOCs compared to a major modification threshold of 40 TPY. Further, each Toxic Air Pollutant (TAP) regulated by LAC 33:III.Chapter 51 is below the Minimum Emission Rate (MER) for such TAP as shown on the Table below. Under the Chapter 51 rules, a project to increase emissions is considered to be a modification only if

the increased emissions will exceed an MER; thus, the project does not constitute a modification under the Ch. 51 rules.

TAP	Permit Limit (tons/yr)	Permit Limit (lb/yr)	Minimum Emission Rate under Ch. 51 (lb/yr)	Permitted Emissions as % of MER
Benzene	0.05	100	260	38%
Cumene	0.04	80	18,000	< 1%
Ethylbenzene	0.05	100	20,000	<1%
Isooctane	0.04	80	Not specified [but RQ is 1000]	N/A [only 8% of RQ] ¹
Napthalene	0.05	100	1990	5%
n-Hexane	0.12	240	13,000	2%
PAHs	0.005	10	25	40%
Toluene	0.05	100	20,000	< 1%
Xylenes	0.05	100	20,000	< 1%

However, although MOUSA does not believe that an Environmental Assessment Statement is legally required due to the *de minimis* nature of the emissions and the overall emissions decrease, MOUSA is submitting this document in order to assist the Department with responding to any public comments concerning the project.

All five tanks, at a minimum, will meet the National Emission Standards for Hazardous Air Pollutants for new sources under 40 C.F.R. Part CC, also known as the "Refinery MACT." These are the most stringent of the existing federal and state technology-based air standards as these rules require the tanks to meet emission limits based on use of Maximum Achievable Control Technology. Four of the five tanks (all except T-4) will also be subject to New Source Performance Standards (NSPS) under 40 C.F.R. Part 60, Subpart Kb. Tank T-4 is not subject to the NSPS controls because its vapor pressure is so low (below 3.5 KPa or 1.5 psia); thus its emissions will also be lower, even without such NSPS controls.²

Before putting the new tanks in service, the dike walls will be surveyed to confirm continued compliance with the federal and state Spill Prevention, Control and

¹ An RQ is counted over 24 hours so in effect, the permit does not even allow the total emissions for a whole year to be the amount that could be emitted within 24 hours. Thus, this illustrates the *de minimis* nature of the permit emissions.

² The permit requires MOUSA to keep records to demonstrate that the material stored in this tank continues to have the low vapor pressure.

Countermeasures (SPCC) rules. Construction of the tanks will meet the most current SPCC rules.³

The tanks that will be replaced are described more specifically below:

- ❖ Former Tank 450-1 & Tank 450-2 replacements. These tanks held 450,000 Barrels and were the two tanks that were located on the west side of the property, north of Judge Perez Drive. MOUSA will replace these two tanks with two new 300,000 barrel tanks (new tanks T-1 and T-2). The former tanks were covered under an older version of NSPS and will be rebuilt to a higher standard under NSPS Kb (40 C.F.R. Part 60, Subpart Kb). These are crude oil tanks and they will have external floating roofs for emissions control.
- ❖ Former Tank 250-3. This tank is located just to the east of former tanks 450-1 and 450-2 and is designated as T3 under the Permit. We had previously permitted this tank under a prior issued General Permit to increase its size to 300,000 Barrels and it is called 300-3 in the refinery's Title V permit (No. 2500-0001-V2). MOUSA made a strategic decision to demolish and rebuild the tank to ensure greater protectiveness given the inspection findings. The former tank also was covered under an older NSPS but the replacement, which will essentially be a new tank now, will be under NSPS Kb. When rebuilt, it will meet the most current standards. This is a crude oil tank and will have an external floating roof for emissions control.
- ❖ Former Tank 200-6. This tank was located just south of Judge Perez. It was a fixed roof tank. That means it lacked a floating roof and seals which reduce emissions. We are replacing this tank with Tank T-4 which will meet the stringent NSPS Kb standards, even though it is unnecessary to do so. The new/reconstructed tank will not legally be subject to NSPS due to the low vapor pressure of its contents (the tank stores diesel fuel). This tank will have authorized emissions of only 0.18 TPY of VOCs (less than 400 pounds per year).
- ❖ Existing Tank 25-2. This tank holds sour water. Our plan is to move it to the center of the tank farm where it will be reconstructed. This tank currently is located within the same tank dike as Tank 80-10. We currently have sufficient tank dike capacity in the existing diked area, but moving the tank will put it into an area with a greater spill capacity, and thus more protectiveness. This tank will also have very low emissions, less than 400 pounds in a year.

³ EPA enacted these new rules in December 2006 and recently extended the compliance deadline to July 2009. MOUSA already complies with the most recent SPCC requirements and does not believe that any further upgrade will be necessary to meet these rules. The amendments primarily addressed facilities that store less than 10,000 gallons of oil above ground and certain qualified oil-filled operating equipment. An excellent overview of the revised rules is available at http://www.epa.gov/oilspill/spcc_dec06.htm.

All five new tanks together will emit not more than 5.93 TPY of Volatile Organic Compounds. And, as noted above, all five together will not have emissions of any Louisiana regulated TAP in excess of the minimum emission rate (MER). All TAPs will be emitted at only a small fraction of the MER. The MER is not a limit, but a trigger for establishing when a "modification" occurs under the Louisiana TAP rules. As the total emissions from all 5 tanks are below the MER, this shows the extremely small impact of the air emissions from these new tanks. And, as noted, there will be an overall decrease in emissions compared to the existing tanks through this tank replacement project.

Q. Have the potential and real adverse environmental effects of the proposed facility (activity) been avoided to the maximum extent possible?

- A. Yes. MOUSA operates its petroleum refinery to mitigate all potential and real adverse environmental impacts. Potential and real environmental impacts are minimized by the application of stringent air pollution controls; containment and drainage systems; and programs to prevent spills, inspect mitigation systems, and provide necessary training to MOUSA personnel.

MOUSA will employ Maximum Available Control Technology (MACT) air pollution controls on all five tanks to substantially minimize air emissions, such as floating roofs with primary and secondary seals, plus sealed appurtenances. Such MACT standards are specified in the permit as enforceable limits per 40 C.F.R. Part 63, Subpart CC. Additionally, the Meraux Refinery is equipped with advanced instrumentation to monitor and control the facility operations.

MOUSA will ensure that all five tanks meet the most recent Spill Prevention, Control and Countermeasures (SPCC) regulations, including secondary containment dikes, materials of construction for the proposed tanks, and best engineering practices for design and construction of the tanks.

MOUSA will manage process wastewater and storm water from the proposed tanks in accordance with the LPDES permit. MOUSA will monitor discharge water quality in accordance with the LPDES permit. MOUSA will report the results of this monitoring to the LDEQ in accordance with the LPDES permit. Stormwater discharged during construction activities will comply with all appropriate regulatory requirements.

Groundwater protection is an integrated part of the design for the proposed facilities. Equipment and procedures are in place to avoid any potential adverse impacts to groundwater. Process piping will be above grade to allow early detection and containment of any potential leaks or spills. Any spill or leak that could affect groundwater will be promptly removed to prevent any adverse impact to groundwater.

The five new tanks will not require deep pilings and therefore constructing pilings into groundwater is not a concern. None of the areas where the tanks will be constructed are known to have groundwater contamination. Murphy has had various groundwater assessment and monitoring programs over the years which indicate that the refinery does not have a groundwater contamination problem.

MOUSA has an Emergency Response Plan that is coordinated with the Local Emergency Planning Committee. State and federal regulations have been promulgated specifically to address the accidental release and off site consequence for toxic and/or flammable substances. These rules contain requirements for hazard assessment, release prevention, emergency response and risk management with which the proposed facilities will comply. The design of the proposed tanks will be subjected to a detailed Process Hazard Analysis to further reduce the likelihood of accidental airborne emissions.

MOUSA will avoid potential adverse effects, such as the release of hazardous chemicals, by designing systems and training personnel to: (1) reduce the possibility of leakage of hazardous chemicals; (2) minimize the amount of leakage should leakage occur; (3) promptly inform the public and relevant agencies regarding possible off site impacts as required by law; and (4) quickly respond to mitigate any adverse effects of the leaks.

To reduce the possibility of leakage of hazardous chemicals to the environment, MOUSA has designed and selected compounds and systems to properly contain hazardous chemicals in accordance with good engineering practices. Materials of construction for tanks, equipment, piping and accessories will be compatible with process fluids to prevent failure from corrosion, stress cracking or fatigue. Periodic inspections and preventative maintenance of all equipment will be performed to keep all process and safety systems in optimum operating condition.

Operations, maintenance and support personnel are trained in the use of appropriate safety equipment and will be able to quickly identify the potential hazards associated with all chemicals and processes within the Meraux Refinery (including the proposed tanks).

Personnel training are provided in (but not limited to) the following:

- Hazardous Communication
- Personal Protective Equipment
- Confined Space Entry
- Emergency Response Procedures
- Hot Work Procedures
- Lockout/Tagout Procedures
- Spill Prevention, Control and Containment

Through proper design, construction, training and operation, the potential for release of hazardous materials will be minimized.

The following is a summary of the general accident prevention program in place at the Meraux Refinery.

The Meraux Refinery encourages employees to participate in all facets of process safety management and accident prevention. Examples of employee participation range from updating and compiling technical documents and chemical information to participating as a member of an incident investigation team. Employees have access to all information created as part of the plant accident prevention program.

The Meraux Refinery maintains a variety of documents on safety which address hazards of the chemicals, safe operation of the processes, the technology of the processes, and the equipment used in the processes. Specific departments within the plant are assigned responsibility for maintaining up to date process safety information. Chemical specific information, including exposure hazards and emergency response/exposure treatment considerations, is provided in material safety data sheets (MSDS). MSDSs are readily available through the Meraux Refinery's computer system. The plant also maintains records of materials of construction, design pressure and temperature ratings, electrical area classifications, piping and instruments diagrams (P&ID), etc.

The Meraux Refinery has a comprehensive program to help ensure that hazards associated with the various processes are identified and controlled. Within the program, each process is systematically examined to identify reasonably foreseeable hazards and ensure that adequate controls are in place to manage these potential hazards. The plant uses Hazard and Operability (HAZOP) analysis technique to perform these evaluations. The incident investigation team findings are entered into a computer database and assigned to appropriate departments for resolution. To help ensure that the process controls and/or process hazards do not eventually deviate significantly from the original process hazard analysis, the Meraux Refinery periodically updates and revalidates the hazard analysis results.

The Meraux Refinery maintains written procedures that address various modes of process operations, such as (1) unit startup, (2) normal operations, (3) temporary operations, (4) emergency shutdown, (5) normal shutdown, and (6) initial startup of a new process. These procedures are periodically reviewed and annually certified as current and accurate. In addition to Operating Procedures, the facility has long standing safe work practices in place to help ensure worker and process safety.

The Meraux Refinery uses contractors for routine maintenance activities, maintenance during shutdown periods, and for construction activities. Contractors performing these activities are subject to stringent safety requirements to assure that they: (1) perform their work in a safe manner, (2) have the appropriate safety knowledge, (3) are aware of the hazards of the workplace, (4) understand what they

should do in the event of an emergency, (5) understand and follow site safety rules, and (6) inform plant personnel of any hazards that they find during their work. A contractor's safety performance is reviewed and must meet certain standards prior to being placed on Murphy's bidder's list.

The Meraux Refinery promptly investigates all incidents that resulted, or reasonably could have resulted in, a fire/explosion, toxic gas release, major property damage, environmental loss, or personal injury. The goal of each investigation is to determine the facts and develop corrective actions to prevent recurrence of the incident or a similar incident. Incident investigation reports can be reviewed during future process hazard assessments and process hazard assessment revalidations.

To help ensure that the accident prevention program is functioning properly, audits are periodically conducted to determine whether the procedures and practices required by the accident prevention program are being implemented. The final resolutions of each finding are documented in a computer database, and the two most recent audit reports are retained.

The processes at the plant have hazards that must be managed to ensure continued safe operation. Collectively, the previously summarized prevention program activities help prevent potential accident scenarios that could be caused by (1) equipment failures and (2) human errors.

Some release containment and control methods used at the Meraux Refinery are

- σ Process relief valves that discharge to a flare to capture and incinerate episodic releases.
- σ Remotely activated valves that discharge to a closed flare system for emergency depressuring.
- σ Manual and remotely operated emergency shutdown valves to permit isolation of the process.
- σ Hardwire alarms for specific process parameters.
- σ Automated emergency shutdown systems for specific parameters.
- σ Computer control of specific process parameters for maximizing process stability.
- σ Curbing and diking to contain potential liquid releases.
- σ Grade paved and sloped to oily water sewer system designed to collect spills.
- σ Firewater system, supplied by multiple fire water pumps, with hydrants and monitors throughout the facility.
- σ Fire extinguishers located throughout the facility.
- σ Water spray systems installed on specific pieces of equipment.
- σ Portable fire fighting equipment.
- σ Trained emergency response personnel.

The Meraux Refinery maintains a written emergency response program, which is in place to protect worker and public safety as well as the environment. The program

consists of procedures for responding to a release of a regulated substance, including the possibility of a fire or explosion if a flammable substance is accidentally released. The procedures address all aspects of emergency response, including reporting of an emergency response, first aid and medical treatment for exposures, evacuation plans, accounting for personnel, notification of local emergency response, and post incident cleanup and decontamination requirements. The overall emergency response program for the Meraux Refinery is coordinated with the Local Emergency Planning Committee (LEPC). This coordination includes periodic meetings of the committee, which includes local emergency response officials, local government officials, and industry representatives.

Thus, MOUSA operates and manages on-site activities in a manner that minimizes any potential damage to the surrounding area.

As with all aspects of the work we do, we are in constant pursuit of opportunities to improve our performance and our productivity to produce even better results for our customers and for our communities. In 2003, the Company completed its Clean Fuels Project at its Meraux refinery, making it one of the first refineries able to produce 100 percent low-sulfur gasoline, reducing emissions and meeting or going beyond current sulfur standards. As a result of this Clean Fuels initiative, we estimate that our Meraux refinery's low-sulfur gasoline reduces vehicle emissions by more than 2,000 tons per year.

In the last ten years, the Company has invested in major environmental improvements totaling more than \$238 million that have resulted in 73 percent reduction in criteria pollutant emissions from its refining operations.

Q. Does a cost benefit analysis of the environmental costs balanced against the social and economic benefits of the proposed facility (activity) demonstrate that the latter outweighs the former?

A. Yes. The proposed activity is to replace older tanks with new tanks that have improved design and safety features and lower emissions. There are no adverse environmental or economic consequences to the project. Further, the new tanks are necessary in order to allow MOUSA to responsibly conduct its business of refining and marketing of petroleum products. MOUSA needs the 4 petroleum product replacement tanks to be replaced as soon as possible in order to provide sufficient storage capacity and the flexibility to have usable tanks when necessary to empty and inspect other tanks. Such replacements are environmentally beneficial from several perspectives. The air emissions will be lower overall than from the existing five tanks. The new tanks will be constructed to higher standards than the old tanks, making the overall impact environmentally beneficial. The movement and reconstruction of the sour water tank will be within a more protective diked area even though the existing area meets regulatory standards.

In 2007

- MOUSA spent \$282 million in operating and maintenance expenses, including \$58.2 million in MOUSA and Contractor labor expenses (wages, benefits, taxes).
- MOUSA spent \$275 million in capital expenses
- MOUSA paid \$3.88 million in property taxes
- MOUSA expenses generated \$1.5 million in sales and use taxes for the Louisiana Department of Revenue
- MOUSA expenses generated \$0.8 million in sales and use taxes for the St. Bernard Parish government

The tax revenue to the state and local governments will continue only as long as MOUSA remains a viable business. The tank replacement project is vital to the ongoing business of MOUSA as it allows not only environmental and safety improvements, but provides the needed flexibility to store materials so that tank inspection and repair schedules can be more easily accommodated.

There will be no increased costs to the community as a result of the new tanks replacing the existing tanks. If anything, any potential cost to the community would be lessened as these are environmental and safety improvements.

Given the facility's positive statewide environmental impacts, insignificant local environmental impacts, and positive social and economic contributions; MOUSA believes its overall social and economic benefits of this project far outweigh any environmental costs, if there are even any environmental costs.

Q. Are there alternative projects which would offer more protection to the environment than the proposed facility (activity) without unduly curtailing non-environmental benefits?

- A. There are no alternative projects which offer more protection to the environment. The tanks will meet federal and state Maximum Achievable Control Technology (MACT) standards, as well as more stringent New Source Performance Standards (NSPS). There are no known alternative process modifications which would result in the desired process improvement as described in the application. Replacing the existing tanks is more protective for the environment – this is an emissions reduction project. Further, moving the sour water tank provides additional spill capacity and more protectiveness than its current location.

Q. Are there alternative sites which offer more protection to the environment than the proposed facility (activity) site without unduly curtailing non-environmental benefits?

- A. No. The replacement tanks must be constructed on the existing refinery site. This is an existing facility; portions of which were originally built by Sinclair Oil Company and commenced operation in the 1920's. The Meraux Refinery was purchased by MOUSA in 1962. The cost of changing sites would be economically impossible. This project involves construction of five new tanks on sites of previously existing tanks within the current property fence line and within existing secondary containment dikes.

The site is in an area that has been developed for industrial use and is zoned accordingly. Finally, the facility has good access to transportation via highways, rail, and water. The potential for transportation incidents is minimal. The roads, railways, and waterways near the site are maintained to accommodate industrial traffic. No traffic should be affected by the tank replacement project in any case.

In summary, the site was chosen because:

- It existed as a heavy industrial site
- Roads, rail, and waterways are adequate for traffic
- No other site offers better environmental features

Because the MOUSA Meraux Refinery is an existing facility and because this permit is for the replacement of five tanks, a traditional alternative site analysis was not appropriate here. Nevertheless, in considering the permit applications, the LDEQ closely reviewed the existing operations, the surrounding area, and other matters pertinent to the site.

As the Meraux Refinery is an existing facility and the project will affect the existing process units and equipment, the Meraux Refinery is the only viable site for the proposed project.

Q. Are there mitigating measures which would offer more protection to the environment than the facility (activity) as proposed without unduly curtailing non-environmental benefits?

- A. No. As described above and detailed in the MOUSA permit applications, the facility is designed and operated to maximize environmental protection, prevent any adverse environmental impacts with mitigation measures judged to be fully protective of the environment. The tanks will meet federal and state Maximum Achievable Control Technology (MACT) standards, as well as New Source Performance Standards (NSPS). As such, there are no known impacts that could be alleviated by additional mitigating measures.

It is of merit to point out and summarize the protective measures that are on-site to deal with emergency situations. For example, the facility has a Spill Prevention Control and Countermeasures Plan and an Emergency Response Plan. The site also has in place:

- Emergency first aid facilities,
- A fire fighting brigade,
- A fire water supply system,
- A Halon fire protection system,
- Portable fire extinguisher, and
- Built in sumps, dikes, and pumps to deal with spills.

The facility is protected from unauthorized ingress and egress by a security system consisting of:

- 24-hour guard,
- 7-foot high fence,
- TV security cameras, and
- Perimeter and process area lighting

As important as are the state-of-the-art equipment systems, it is equally important to have qualified people to operate the systems. MOUSA recruits qualified personnel and fully trains them in the operation of the facilities. All personnel participate in MOUSA training programs on safety and quality assurance/quality control. Additionally, there are written procedures for site-specific activity; site personnel are trained in these written procedures prior to on-the-job training.

MOUSA is committed to its environmental and safety performance and will continue to minimize any environmental impact. The Meraux Refinery is dedicated to continuous improvement of the compatibility of its operations that meet their customers' needs. MOUSA recognizes the importance of efficiently meeting society's needs while responsibly working with the public and government to protect human health and the environment.